

Compact or Package Substation Up to 15kV 2500VA

Gedac Electric manufacture a complete line of compact Package substations in conformance with IEC 61330 standards and customer's specification. The Gedac range of Package substations continue to evolve to meet the changing needs of our customers and the design and flexibility of the Gedac package substation conforms to local and international standards, Gedac's own demanding quality standards, overall product reliability for the MV, Transformer and LV equipment and functionality of the complete package substation.

The Gedac Electric Package substations with Voltages up to 15kV and 2,500kVA are outdoor compartmental type substations consisting of three key interconnected electrical components namely the incoming medium voltage section, the transformer section and the low voltage distribution section.

The MV Switchgear, Transformer and LVDB are interconnected and mounted on a common base in an outdoor housing designed and manufactured by Gedac Electric ready for network connection.



Standard Features

- **Medium Voltage Switchgear** typically a **Ring Main Unit (RMU)** of SF6 (optional oil type) as per customer requirements. The RMU offered is typically the Saudi Lucy SF6 Ring Main Unit manufactured for Saudi conditions, but other reputable brands may be supplied as specified by customers.
- **Step-down Transformer (MV to LV)** - shall be Oil filled type (optional dry type) transformer to suit the application and/or specification. Gedac offer our partners transformers designed and manufactured in Saudi for Saudi conditions.
- **LV Distribution Board (LVDB)** - distribution board with main incoming low voltage circuit breaker (fed from the transformer) and multiple low voltage feeders can be accommodated, the feeder circuits to be flange connected or cable connected type as per customer requirement. The Low Voltage switchgear offered are mainly GE circuit breakers but other reputable brands may be supplied as specified by customers.

Gedac Electric is a single source supplier providing high quality package substations tailored to the customer or project specifications. The Ring Main Unit, Transformer and LV Feeder equipment are all IEC conforming devices and housed in a Gedac Electric designed and manufactured outdoor enclosure based on Gedac's more 30 years of experience in building power distribution equipment in Saudi Arabia.

Gedac Electric offers the ultimate for maximum customer benefits:

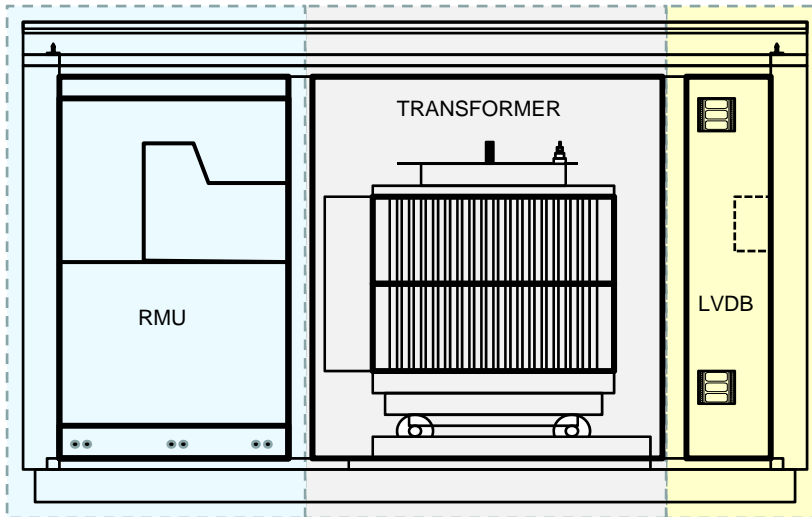
- Single point of contact and contract handling
- Better follow up and improved co-ordination between supplier and customer
- Minimum time for installation and commissioning
- Reduced operating costs and logistics



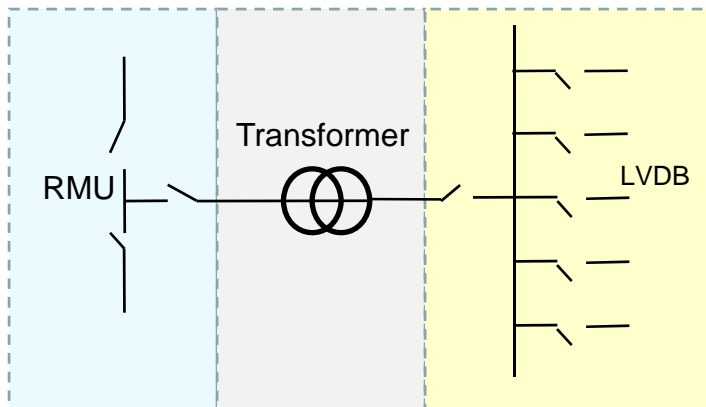
Compact or Package Substation

Package Substations are designed with one of the following arrangements whichever suits the installation requirement of the customers project or application:

- Typically the MV Ring Main Unit & LV distribution panel are fixed on the face of the Package substations with the transformer located between them. The Ring Main Unit & LV distribution panels are fixed on opposite sides of the transformer and the MV RMU, Transformer and LVDF are compartmented from each other.
- Alternatively the face of the package Substation is the LV distribution panel and an outlet of MV bushing. The transformer is located behind. In this case, the MV Ring Main Unit is installed adjacent to the package Substation as a free standing unit.



Typical Substation Layout



Typical Single Line Diagram

Specifications

Extensible and non Extensible RMU

- System Voltage up to 15.5kV
- Impulse withstand voltage 95kV (Peak)
- Rated Frequency 60Hz
- Switch connection to MV network 630Amps (Ring Switches)
- Tee-off feed connection to Transformer 200Amps (circuit breaker or fuse-switch)
- Short circuit peak making current 50KA (Ring Switches & Circuit Breaker)
- Short circuit breaking current 20KA RMS (Circuit Breaker)
- Internal Arc Rating 20KA 1 Sec.

Oil immersed Transformer (MV to LV step down)

- Rated power up to 2500 kVA
- Rated secondary voltage 380/220V
- Vector group Dyn

Low Voltage Distribution

- Main incomer 400 to 4000Amps (switch or circuit breaker) dependent on transformer rating.
- Feeders 60 to 4000Amps subject to customer requirement.

General Characteristics

- Ambient Temperature normal operating conditions upto 40 deg C
- Optional 50deg C on request (derating of MV and LV switchgear)
- Standard Color Cream or Gray
- Outdoor operation
- Compartmented (MV/Txf/LV)
- Naturally vented
- Degree of standard protection MV & LV compartments subject to customer requirement.

Optional

- Metering devices (LV & MV)
- Automation solutions
- Primary Voltages up to 33kV

Typical Dimensions: **

- 200-500KVA : 1750(W) x 2600(L) x 1765(H) mm
- 1000KVA : 1750(W) x 3500(L) x 1950(H) mm
- 1500KVA : 1750(W) x 3640(L) x 2220(H) mm

** GIVEN DIMENSIONS CAN BE CHANGED. HAS TO BE CONFIRMED AT THE TIME OF ORDER.

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